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(54) Title: METHODS AND COMPOSITIONS COMPRISING NON-PEPTIDE SMALL MOLECULES THAT SOLUBILIZE BETA AMYLOID PEPTIDE FIBER

(57) Abstract: The present invention comprises novel compositions and methods for the treatment of neurological diseases associated with beta amyloid peptide. In particular, the present invention is directed to A<sub>B</sub> fiber solubilization, for the treatment of amyloid-associated diseases such as Alzheimer's disease, and is described herein as being achieved by using small molecules binding to A<sub>B</sub> fiber. The present invention further comprises novel methods of designing and screening compositions for the treatment of neurological disease wherein the design aspect comprises the modeling of molecular scaffolds having optimal structural characteristics that enable the development of small molecule compositions of non-peptide nature having desirable solubilization effects on amyloid plaques. In one embodiment, the design of the compounds comprises a molecular structure with three chemical domains that include a melatonin-like domain, a nicotine-like domain and a peptide-like domain for binding to A<sub>B</sub>.

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## INTERNATIONAL SEARCH REPORT

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## A. CLASSIFICATION OF SUBJECT MATTER

IPC: A61K 38/04(2006.01)

USPC: 514/17

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

: 514/17

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
EAST

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6172043 B1 (Ingram et al.) 09 January 2001 (09.01.2001), column 1, lines 13-17; column 4, lines 15-34.	1-20

 Further documents are listed in the continuation of Box C. See patent family annex.

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